

1

## SEQUENCE LISTING

&lt;110&gt; BASF Aktiengesellschaft

&lt;120&gt; Hoden-spezifisches Calpain

&lt;120&gt; Testis specific calpain

&lt;130&gt; OZ0050/

&lt;140&gt;

&lt;141&gt;

&lt;160&gt; 2

&lt;170&gt; PatentIn Ver. 2.0

&lt;210&gt; 1

&lt;211&gt; 2338

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; 5'UTR

&lt;222&gt; (1)..(103)

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&lt;221&gt; CDS

&lt;222&gt; (104)..(2212)

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&lt;221&gt; 3'UTR

&lt;222&gt; (2213)..(2338)

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 Met Val Ala His  
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ata aac aac agc cgg ctc aag gcc aag ggc gtg ggc cag cac gac aac 163  
 Ile Asn Asn Ser Arg Leu Lys Ala Lys Gly Val Gly Gln His Asp Asn  
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gcc cag aac ttt ggt aac cag agc ttt gag gag ctg cga gca gcc tgt 211  
 Ala Gln Asn Phe Gly Asn Gln Ser Phe Glu Glu Leu Arg Ala Ala Cys  
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cta aga aag ggg gag ctc ttc gag gac ccc tta ttc cct gct gaa ccc 259  
 Leu Arg Lys Gly Glu Leu Phe Glu Asp Pro Leu Phe Pro Ala Glu Pro  
 40 45 50

agc tca ctg ggc ttc aag gac ctg ggc ccc aac tcc aaa aat gtg cag 307  
 Ser Ser Leu Gly Phe Lys Asp Leu Gly Pro Asn Ser Lys Asn Val Gln  
 55 60 65

aac atc tcc tgg cag cgg ccc aag gat atc ata aac aac cct cta ttc 355  
 Asn Ile Ser Trp Gln Arg Pro Lys Asp Ile Ile Asn Asn Pro Leu Phe

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ctg cta tac cgc gtg gtg ccc aga gga cag agc ttc aag aaa aac tat Leu Leu Tyr Arg Val Val Pro Arg Gly Gln Ser Phe Lys Lys Asn Tyr 120 125 130			499
gct ggc atc ttc cat ttt cag att tgg cag ttt gga cag tgg gtg aac Ala Gly Ile Phe His Phe Gln Ile Trp Gln Phe Gly Gln Trp Val Asn 135 140 145			547
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gcg tat gcc aag ctg agt ggg tcc tat gaa gca ttg tca ggg ggc agt Ala Tyr Ala Lys Leu Ser Gly Ser Tyr Glu Ala Leu Ser Gly Gly Ser 185 190 195			691
acc atg gag ggc ctt gag gac ttc aca gga ggc gtg gcc cag agc ttc Thr Met Glu Gly Leu Glu Asp Phe Thr Gly Gly Val Ala Gln Ser Phe 200 205 210			739
caa ctc cag agg ccc cct cag aac ctg ctc agg ctc ctt agg aag gcc Gln Leu Gln Arg Pro Pro Gln Asn Leu Leu Arg Leu Leu Arg Lys Ala 215 220 225			787
gtg gag cga tcc tcc ctc atg ggt tgc tcc att gaa gtc acc agt gat Val Glu Arg Ser Ser Leu Met Gly Cys Ser Ile Glu Val Thr Ser Asp 230 235 240			835
agt gaa ctg gaa tcc atg act gac aag atg ctg gtg aga ggg cac gct Ser Glu Leu Glu Ser Met Thr Asp Lys Met Leu Val Arg Gly His Ala 245 250 255 260			883
tac tct gtg act ggc ctt cag gat gtc cac tac aga ggc aaa atg gaa Tyr Ser Val Thr Gly Leu Gln Asp Val His Tyr Arg Gly Lys Met Glu 265 270 275			931
aca ctg att cgg gtc cgg aat ccc tgg ggc cgg att gag tgg aat gga Thr Leu Ile Arg Val Arg Asn Pro Trp Gly Arg Ile Glu Trp Asn Gly 280 285 290			979
gct tgg agt gac agt gcc agg gag tgg gaa gag gtg gcc tca gac atc Ala Trp Ser Asp Ser Ala Arg Glu Trp Glu Glu Val Ala Ser Asp Ile 295 300 305			1027
cag atg cag ctg ctg cac aag acg gag gac ggg gag ttc tgg atg tcc Gln Met Gln Leu Leu His Lys Thr Glu Asp Gly Glu Phe Trp Met Ser			1075

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tac caa gat ttc ctg aac aac ttc acg ctc ctg gag atc tgc aac ctc Tyr Gln Asp Phe Leu Asn Asn Phe Thr Leu Leu Glu Ile Cys Asn Leu 325 330 335 340			1123
acg cct gat aca ctc tct ggg gac tac aag agc tac tgg cac acc acc Thr Pro Asp Thr Leu Ser Gly Asp Tyr Lys Ser Tyr Trp His Thr Thr 345 350 355			1171
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aac cac cct ggc acg ttc tgg acc aac ccc cag ttt aag atc tct ctt Asn His Pro Gly Thr Phe Trp Thr Asn Pro Gln Phe Lys Ile Ser Leu 375 380 385			1267
cct gag ggg gat gac cca gag gat gac gca gag ggc aat gtt gtg gtc Pro Glu Gly Asp Asp Pro Glu Asp Asp Ala Glu Gly Asn Val Val Val 390 395 400			1315
tgc acc tgc ctg gtg gcc cta atg cag aag aac tgg cgg cat gca cgg Cys Thr Cys Leu Val Ala Leu Met Gln Lys Asn Trp Arg His Ala Arg 405 410 415 420			1363
cag cag gga gcc cag ctg cag acc att ggc ttt gtc ctc tac gcg gtc Gln Gln Gly Ala Gln Leu Gln Thr Ile Gly Phe Val Leu Tyr Ala Val 425 430 435			1411
cca aaa gag ttt cag aac att cag gat gtc cac ttg aag aag gaa ttc Pro Lys Glu Phe Gln Asn Ile Gln Asp Val His Leu Lys Lys Glu Phe 440 445 450			1459
ttc acg aag tat cag gac cac ggc ttc tca gag atc ttc acc aac tca Phe Thr Lys Tyr Gln Asp His Gly Phe Ser Glu Ile Phe Thr Asn Ser 455 460 465			1507
cgg gag gtg agc agc caa ctc cgg ctg cct ccg ggg gaa tat atc att Arg Glu Val Ser Ser Gln Leu Arg Leu Pro Pro Gly Glu Tyr Ile Ile 470 475 480			1555
att ccc tcc acc ttt gag cca cac aga gat gct gac ttc ctg ctt cgg Ile Pro Ser Thr Phe Glu Pro His Arg Asp Ala Asp Phe Leu Leu Arg 485 490 495 500			1603
gtc ttc acc gag aag cac agc gag tca tgg gaa ttg gat gaa gtc aac Val Phe Thr Glu Lys His Ser Glu Ser Trp Glu Leu Asp Glu Val Asn 505 510 515			1651
tat gct gag caa ctc caa gag gaa aag gtc tct gag gat gac atg gac Tyr Ala Glu Gln Leu Gln Glu Glu Lys Val Ser Glu Asp Asp Met Asp 520 525 530			1699
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Phe Lys Ser Phe Lys Thr Lys Gly Phe Gly Leu Asp Ala Cys Arg Cys			
565	570	575	580
atg atc aac ctc atg gat aaa gat ggc tct ggc aag ctg ggg ctt cta			1891
Met Ile Asn Leu Met Asp Lys Asp Gly Ser Gly Lys Leu Gly Leu Leu			
	585	590	595
gag ttc aag atc ctg tgg aaa aaa ctc aag aaa tgg atg gac atc ttc			1939
Glu Phe Lys Ile Leu Trp Lys Lys Leu Lys Lys Trp Met Asp Ile Phe			
	600	605	610
aga gag tgt gac cag gac cat tca ggc acc ttg aac tcc tat gag atg			1987
Arg Glu Cys Asp Gln Asp His Ser Gly Thr Leu Asn Ser Tyr Glu Met			
	615	620	625
cgc ctg gtt att gag aaa gca ggc atc aag ctg aac aac aag gta atg			2035
Arg Leu Val Ile Glu Lys Ala Gly Ile Lys Leu Asn Asn Lys Val Met			
	630	635	640
cag gtc ctg gtg gcc agg tat gca gat gat gac ctg atc ata gac ttt			2083
Gln Val Leu Val Ala Arg Tyr Ala Asp Asp Asp Leu Ile Ile Asp Phe			
	645	650	655
gac agc ttc atc agc tgt ttc ctg agg cta aag acc atg ttc aca ttc			2131
Asp Ser Phe Ile Ser Cys Phe Leu Arg Leu Lys Thr Met Phe Thr Phe			
	665	670	675
ttt cta acc atg gac ccc aag aat act ggc cat att tgc ttg agc ctg			2179
Phe Leu Thr Met Asp Pro Lys Asn Thr Gly His Ile Cys Leu Ser Leu			
	680	685	690
gaa cag tgg ctg cag atg acc atg tgg gga tag aggcgctgta ggagcctgggt			2232
Glu Gln Trp Leu Gln Met Thr Met Trp Gly			
	695	700	
catctctacc agcagcagca gcagcgaggt tctagcccag gaggggtgggg tgcttcttgt			2292
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Gln His Asp Asn Ala Gln Asn Phe Gly Asn Gln Ser Phe Glu Glu Leu			
	20	25	30
Arg Ala Ala Cys Leu Arg Lys Gly Glu Leu Phe Glu Asp Pro Leu Phe			
	35	40	45
Pro Ala Glu Pro Ser Ser Leu Gly Phe Lys Asp Leu Gly Pro Asn Ser			
	50	55	60

Lys Asn Val Gln Asn Ile Ser Trp Gln Arg Pro Lys Asp Ile Ile Asn  
 65 70 75 80  
 Asn Pro Leu Phe Ile Met Asp Gly Ile Ser Pro Thr Asp Ile Cys Gln  
 85 90 95  
 Gly Ile Leu Gly Asp Cys Trp Leu Leu Ala Ala Ile Gly Ser Leu Thr  
 100 105 110  
 Thr Cys Pro Lys Leu Leu Tyr Arg Val Val Pro Arg Gly Gln Ser Phe  
 115 120 125  
 Lys Lys Asn Tyr Ala Gly Ile Phe His Phe Gln Ile Trp Gln Phe Gly  
 130 135 140  
 Gln Trp Val Asn Val Val Val Asp Asp Arg Leu Pro Thr Lys Asn Asp  
 145 150 155 160  
 Lys Leu Val Phe Val His Ser Thr Glu Arg Ser Glu Phe Trp Ser Ala  
 165 170 175  
 Leu Leu Glu Lys Ala Tyr Ala Lys Leu Ser Gly Ser Tyr Glu Ala Leu  
 180 185 190  
 Ser Gly Gly Ser Thr Met Glu Gly Leu Glu Asp Phe Thr Gly Gly Val  
 195 200 205  
 Ala Gln Ser Phe Gln Leu Gln Arg Pro Pro Gln Asn Leu Leu Arg Leu  
 210 215 220  
 Leu Arg Lys Ala Val Glu Arg Ser Ser Leu Met Gly Cys Ser Ile Glu  
 225 230 235 240  
 Val Thr Ser Asp Ser Glu Leu Glu Ser Met Thr Asp Lys Met Leu Val  
 245 250 255  
 Arg Gly His Ala Tyr Ser Val Thr Gly Leu Gln Asp Val His Tyr Arg  
 260 265 270  
 Gly Lys Met Glu Thr Leu Ile Arg Val Arg Asn Pro Trp Gly Arg Ile  
 275 280 285  
 Glu Trp Asn Gly Ala Trp Ser Asp Ser Ala Arg Glu Trp Glu Glu Val  
 290 295 300  
 Ala Ser Asp Ile Gln Met Gln Leu Leu His Lys Thr Glu Asp Gly Glu  
 305 310 315 320  
 Phe Trp Met Ser Tyr Gln Asp Phe Leu Asn Asn Phe Thr Leu Leu Glu  
 325 330 335  
 Ile Cys Asn Leu Thr Pro Asp Thr Leu Ser Gly Asp Tyr Lys Ser Tyr  
 340 345 350  
 Trp His Thr Thr Phe Tyr Glu Gly Ser Trp Arg Arg Gly Ser Ser Ala  
 355 360 365  
 Gly Gly Cys Arg Asn His Pro Gly Thr Phe Trp Thr Asn Pro Gln Phe  
 370 375 380

Lys Ile Ser Leu Pro Glu Gly Asp Asp Pro Glu Asp Asp Ala Glu Gly  
 385 390 395 400  
 Asn Val Val Val Cys Thr Cys Leu Val Ala Leu Met Gln Lys Asn Trp  
 405 410 415  
 Arg His Ala Arg Gln Gln Gly Ala Gln Leu Gln Thr Ile Gly Phe Val  
 420 425 430  
 Leu Tyr Ala Val Pro Lys Glu Phe Gln Asn Ile Gln Asp Val His Leu  
 435 440 445  
 Lys Lys Glu Phe Phe Thr Lys Tyr Gln Asp His Gly Phe Ser Glu Ile  
 450 455 460  
 Phe Thr Asn Ser Arg Glu Val Ser Ser Gln Leu Arg Leu Pro Pro Gly  
 465 470 475 480  
 Glu Tyr Ile Ile Ile Pro Ser Thr Phe Glu Pro His Arg Asp Ala Asp  
 485 490 495  
 Phe Leu Leu Arg Val Phe Thr Glu Lys His Ser Glu Ser Trp Glu Leu  
 500 505 510  
 Asp Glu Val Asn Tyr Ala Glu Gln Leu Gln Glu Glu Lys Val Ser Glu  
 515 520 525  
 Asp Asp Met Asp Gln Asp Phe Leu His Leu Phe Lys Ile Val Ala Gly  
 530 535 540  
 Glu Gly Lys Glu Ile Gly Val Tyr Glu Leu Gln Arg Leu Leu Asn Arg  
 545 550 555 560  
 Met Ala Ile Lys Phe Lys Ser Phe Lys Thr Lys Gly Phe Gly Leu Asp  
 565 570 575  
 Ala Cys Arg Cys Met Ile Asn Leu Met Asp Lys Asp Gly Ser Gly Lys  
 580 585 590  
 Leu Gly Leu Leu Glu Phe Lys Ile Leu Trp Lys Lys Leu Lys Lys Trp  
 595 600 605  
 Met Asp Ile Phe Arg Glu Cys Asp Gln Asp His Ser Gly Thr Leu Asn  
 610 615 620  
 Ser Tyr Glu Met Arg Leu Val Ile Glu Lys Ala Gly Ile Lys Leu Asn  
 625 630 635 640  
 Asn Lys Val Met Gln Val Leu Val Ala Arg Tyr Ala Asp Asp Asp Leu  
 645 650 655  
 Ile Ile Asp Phe Asp Ser Phe Ile Ser Cys Phe Leu Arg Leu Lys Thr  
 660 665 670  
 Met Phe Thr Phe Phe Leu Thr Met Asp Pro Lys Asn Thr Gly His Ile  
 675 680 685  
 Cys Leu Ser Leu Glu Gln Trp Leu Gln Met Thr Met Trp Gly  
 690 695 700